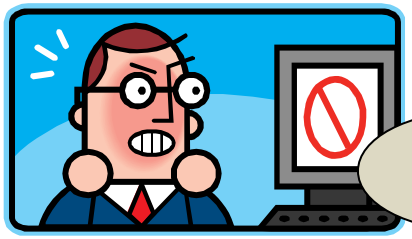
It’s the Next Disaster.
Do we know what data we have?

Current Situation for NOAA Data Discovery & Access



User

Find, get, store, reformat, open data.

User Tool

Manual search across NOAA projects

NOAA Offices

NWS | NESDIS | NOS | NMFS | OAR | OMAO | *Grantees*

Manual retrieval from incompatible sources

Data Sources

Satellite | Radar | Buoy | Ship | UAS | Sonar | Gauge | Chart | Model

ROV/UAV | Marine Mammals | Surveys | Enforcement | NOAA Labs

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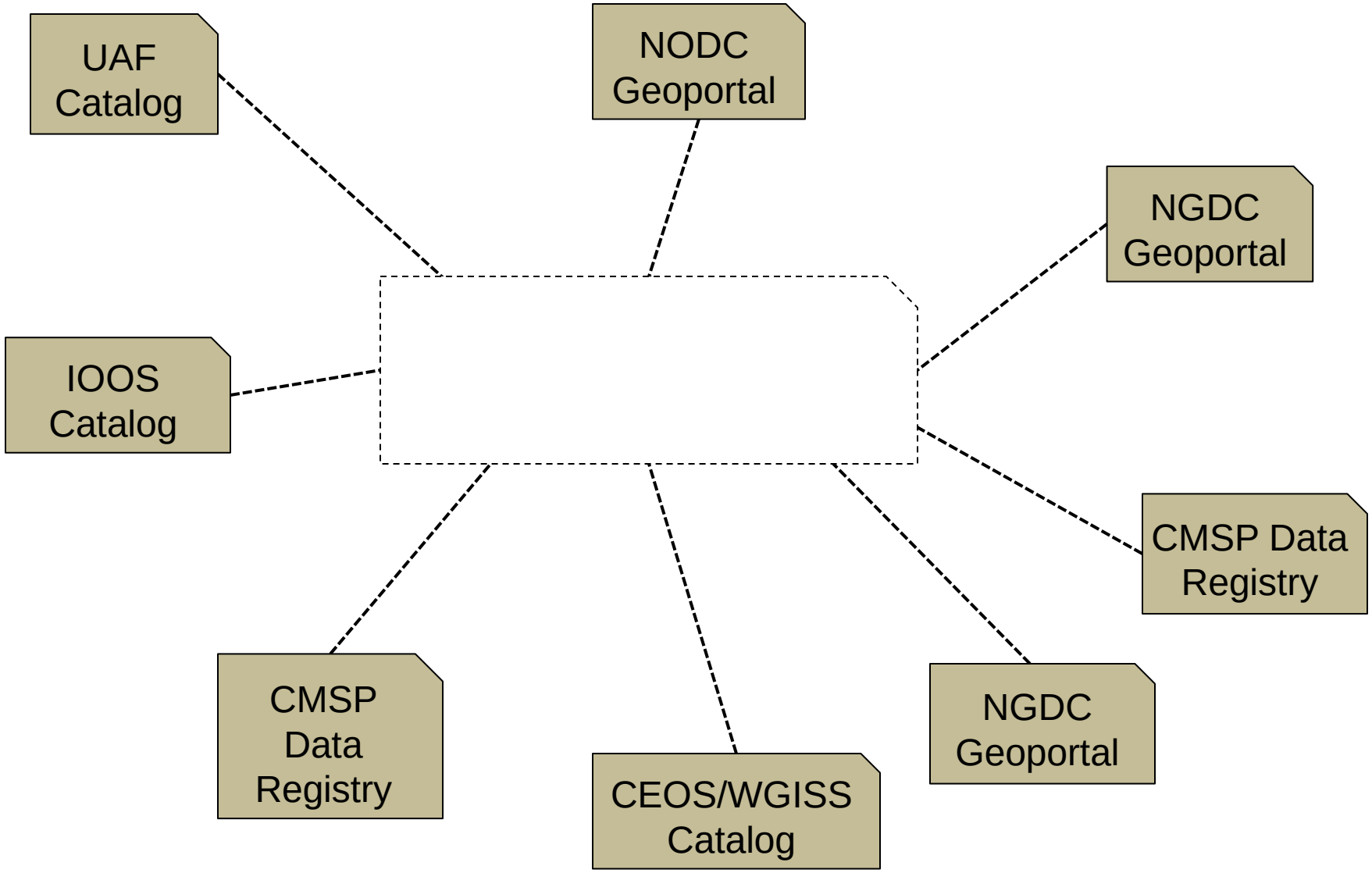
Some Community Catalogs exist...but they are not all linked



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NOAA Data Catalog Goals

- Users can find NOAA data for desired phenomenon, location and time
  - Without knowing Office/Program/Project affiliation
  - With their preferred software tools
- Data providers can register their information once in a local catalog
  - And not have to register with data.gov, GCMD, GEOSS, etc.
- NOAA leadership can see improvements in NOAA data discovery & access

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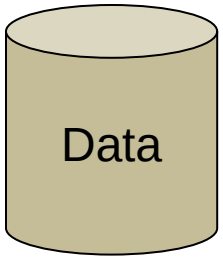
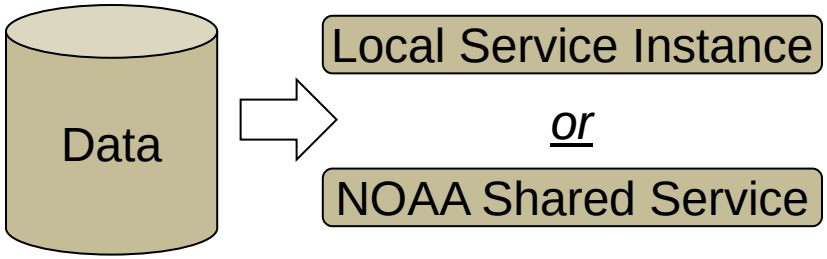
Data Provider Roles

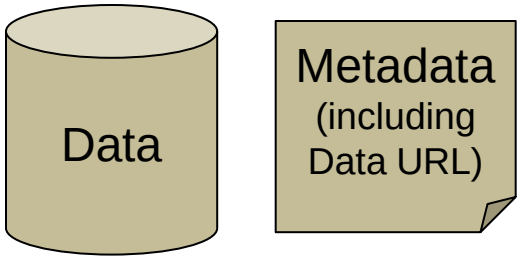
1: Obtain Data.



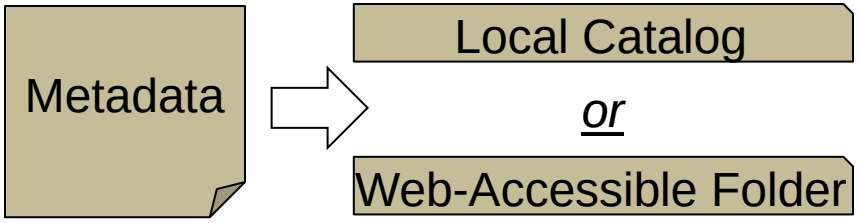
2: Make your data accessible on-line.



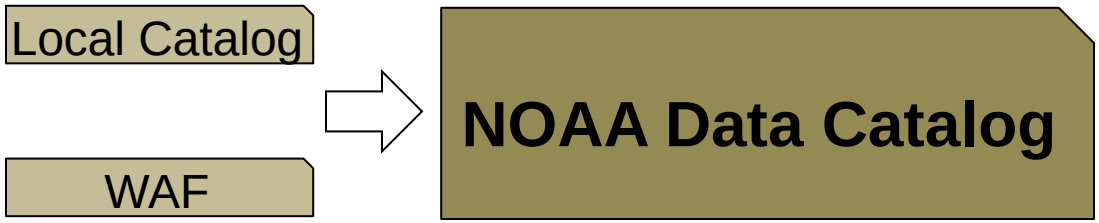
3: Document your Data.



4: Make your metadata accessible.



5: Tell us where to find your metadata



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NOAA Data Catalog Roles

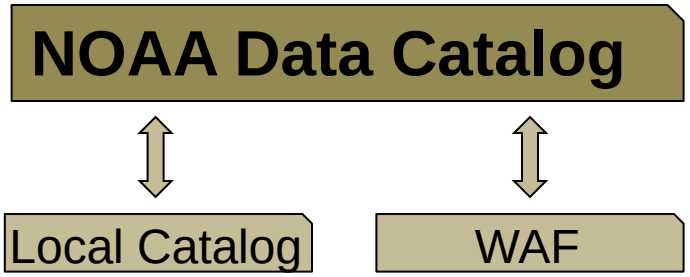
1: Register NOAA metadata sources.

NOAA Catalog
- Local catalog #1
- Local catalog #2
- Metadata WAF #1
- Metadata WAF #2

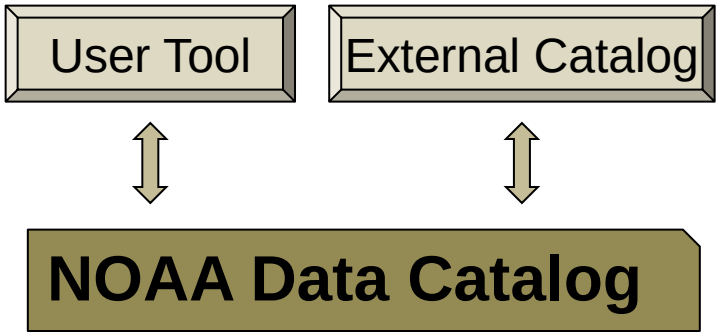
2: Provide feedback to data providers.

- ☑ • Metadata quality score
- ☑ • Server compatibility test

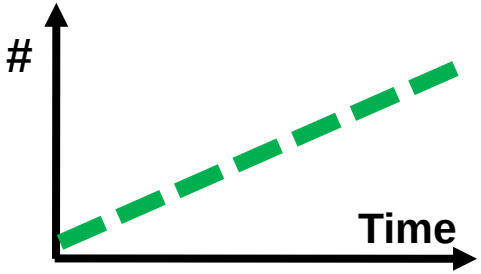
3: Search NOAA metadata sources.



4: Support searches by users & external catalogs.



5: Produce "dashboard" summary reports.



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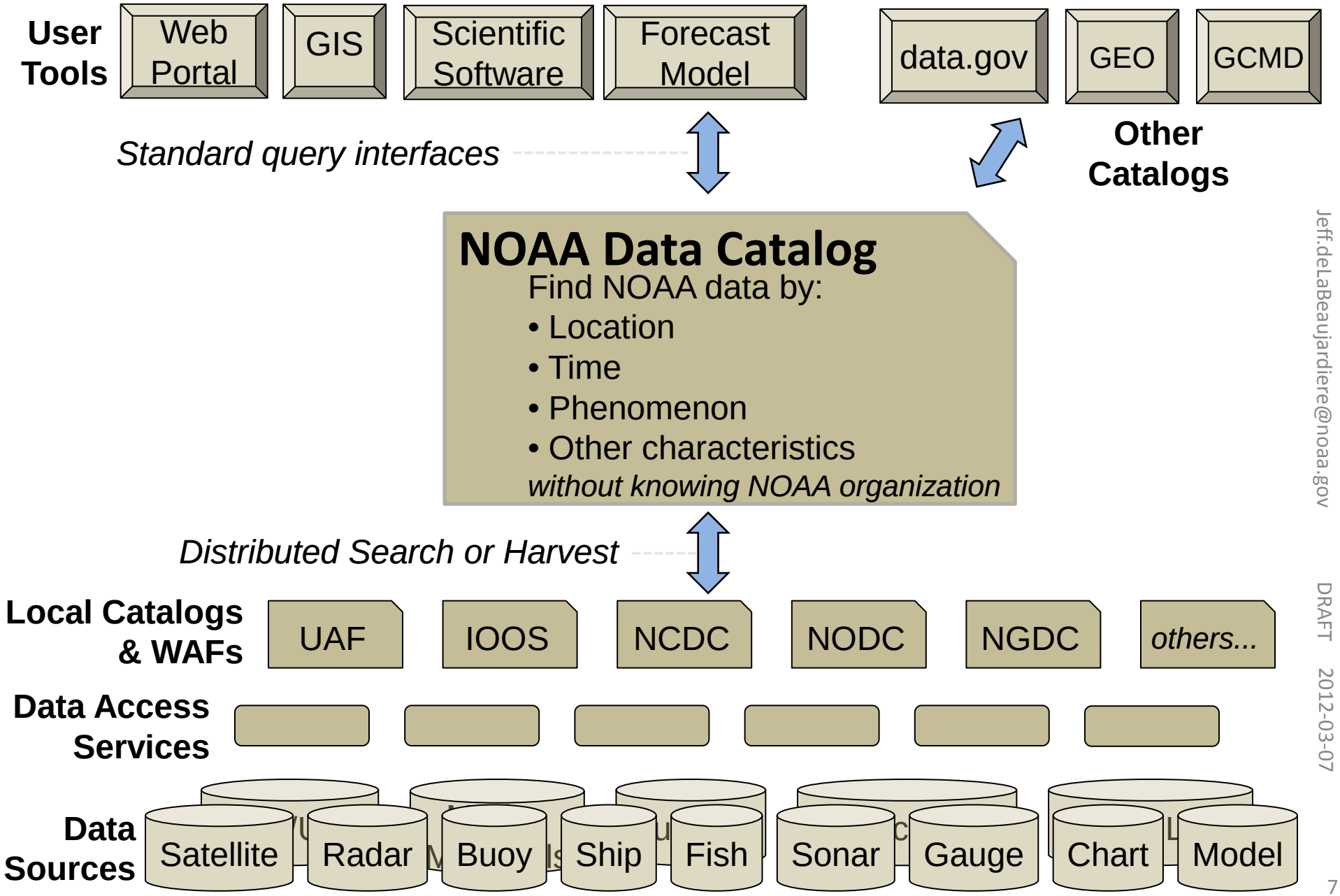
NOAA Data Catalog Conceptual Architecture



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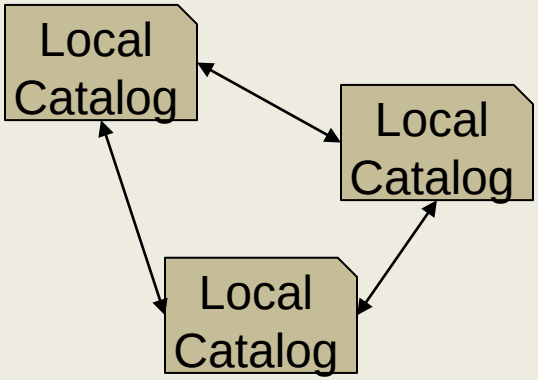
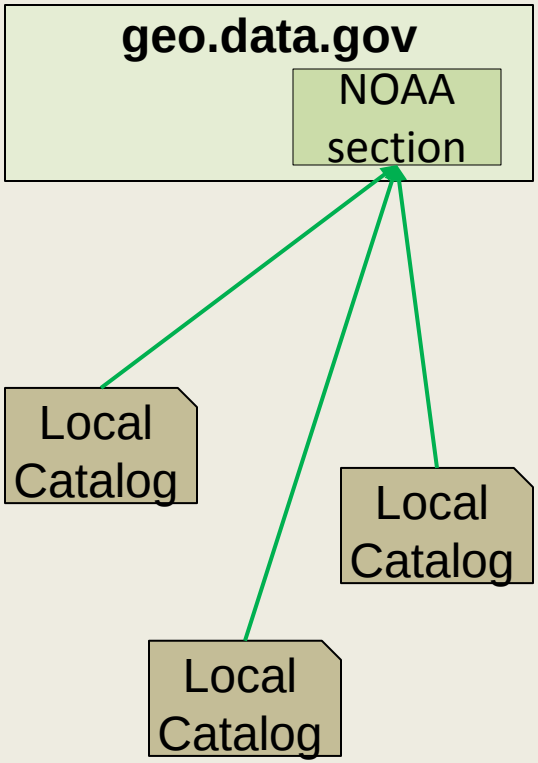
Alternative approaches to a NOAA Data Catalog

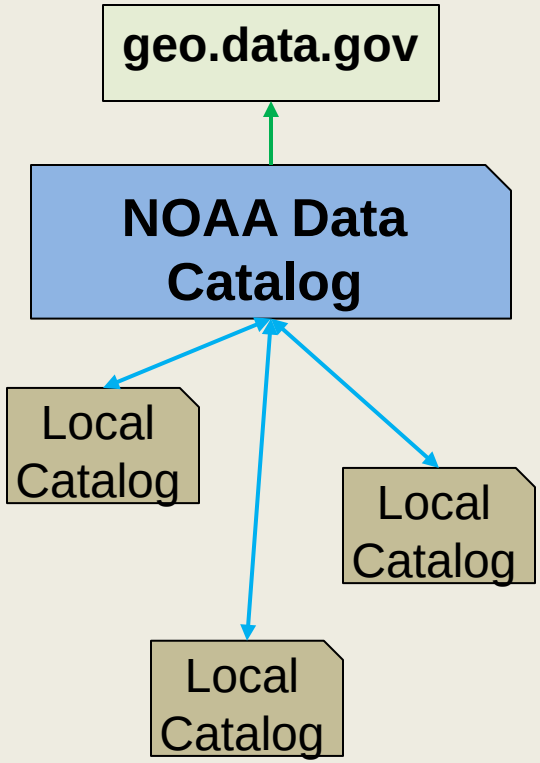
A) Federated local catalogs; peer-to-peer relationship



B) Special "NOAA" section in data.gov



C) NOAA Data Catalog as unifying component and official conduit to data.gov



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Alternative approaches to a NOAA Data Catalog

A) Federated local catalogs; peer-to-peer relationship

Pros: One less component to operate.
Cons: Local catalogs must all be able to federate with each other. No designated master, unless one project accepts that role. WAFs must partner with a local catalog.

B) Special "NOAA" section in data.gov

Pros: One less component to operate.
Cons: Reduced control over look-and-feel of NOAA section. May need similar sections in GCMD, GEOSS, or other external catalogs. Each local catalog must separately register with data.gov. NOAA section at risk if data.gov is canceled like Geo 1-Stop.

C) NOAA Data Catalog as unifying component and official conduit to data.gov

Pros: Local catalogs focus on their own content, and only register once with NOAA Catalog. NOAA-wide Catalog:
- can have agency look;
- can be additional agency-wide entry point to local catalogs or local data;
- can serve as confirmation that project has done the right things;
- can produce agency-wide metrics regarding data accessibility and metadata quality.

Cons: One additional component to operate

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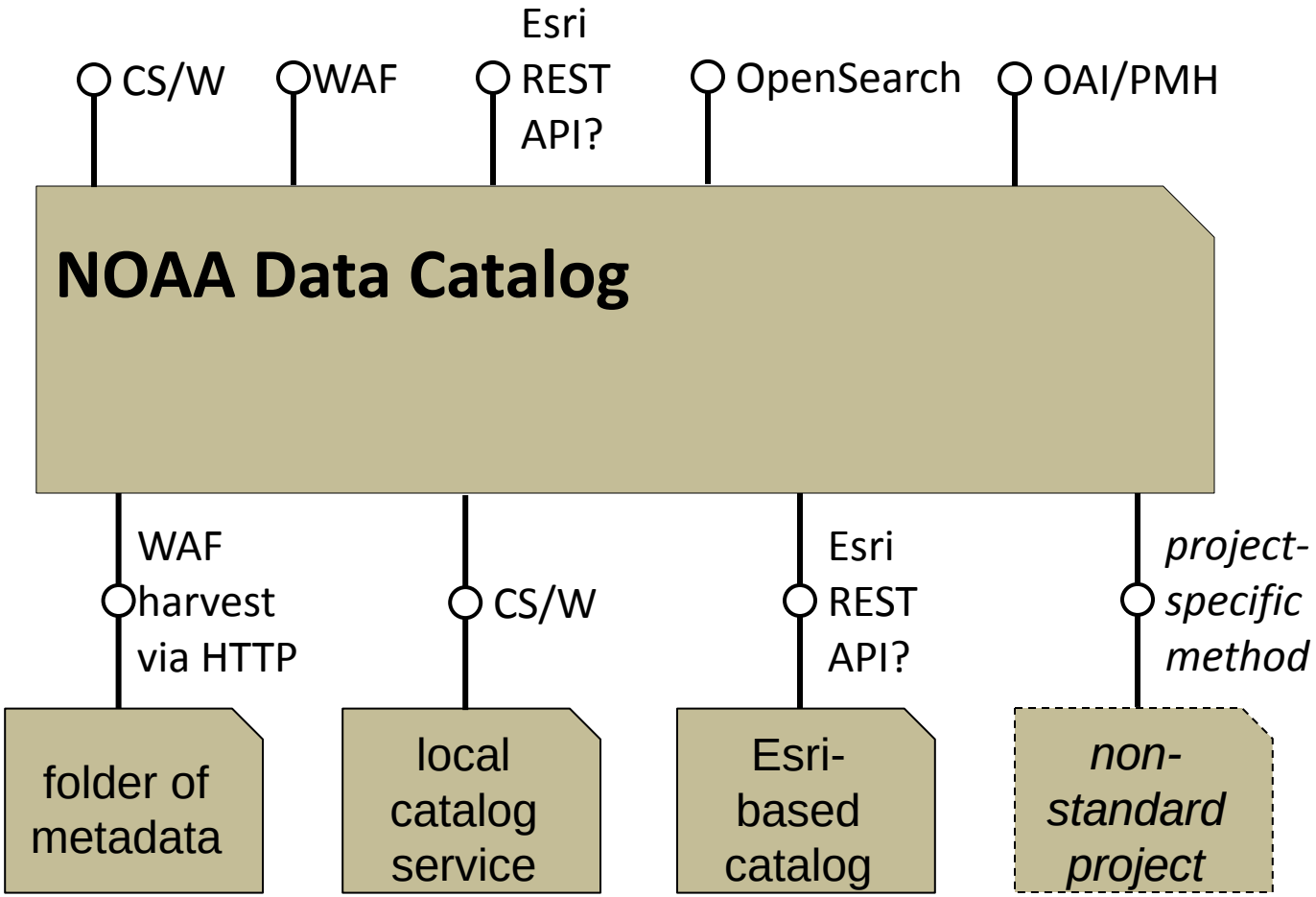
Possible NOAA Data Catalog Interfaces

- Each local metadata source must support at least one external interface.
- NOAA Catalog will offer several external interfaces.
  - Actual list will depend on available software.



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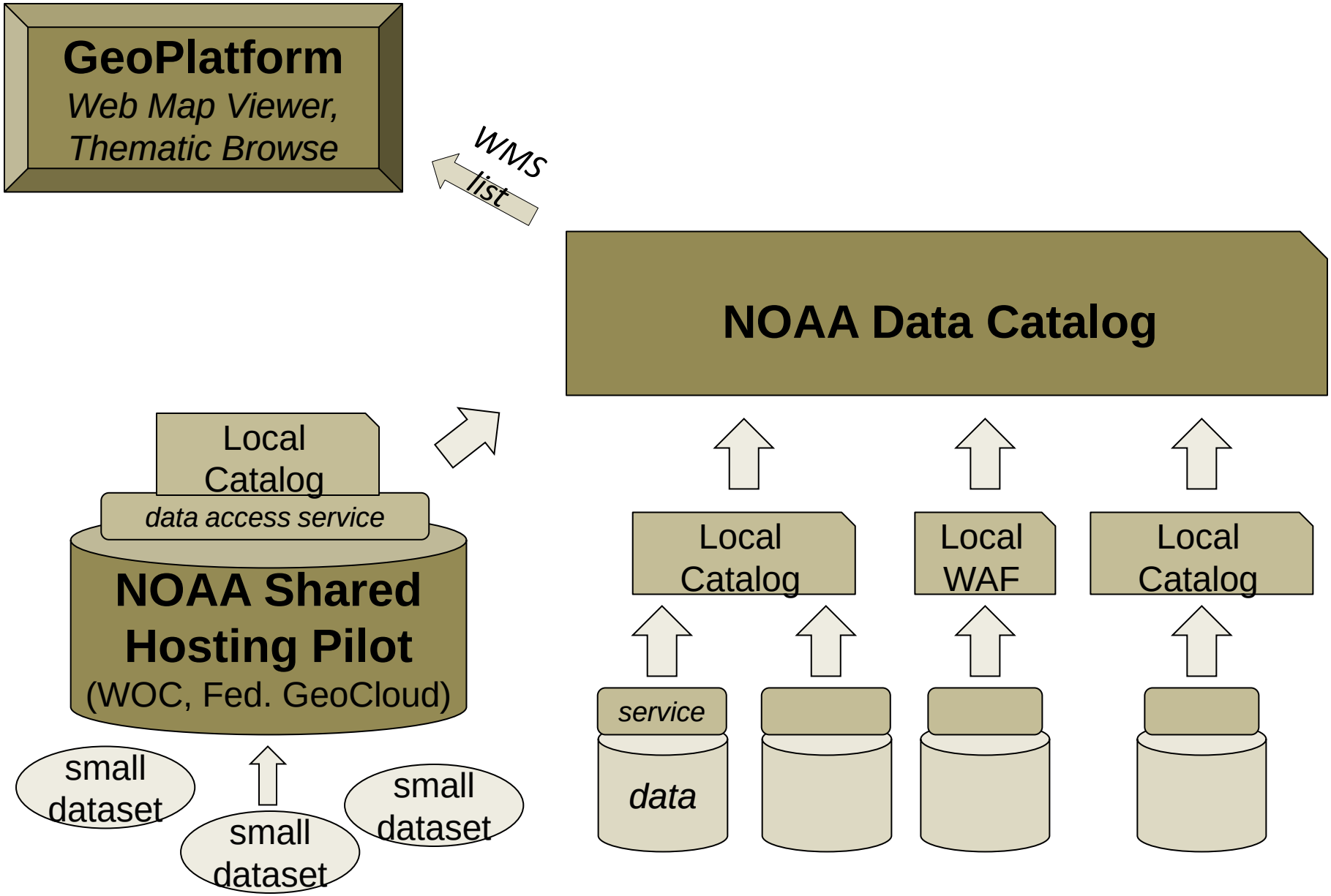
Possible Relation between NOAA Data Catalog, NOAA GeoPlatform, and NOAA Shared Hosting pilot



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Notional Plan

- Begin **prototyping** activities now
  - Assess feasibility, approach, level of effort
- No money ⇒ in-house labor, best-effort basis
  - Jeff DLB: planning & management
  - Matt Austin: implementation & testing
  - existing Catalogs: Matt will work with you to get registered
  - data providers: improve metadata, serve data
  - DMIT members: provide expertise & collaboration
- Milestones
  - Feb-Mar: socialize idea, refine plan
  - May: briefing or demo at NOAA EDM Conference
  - June: briefing or demo at OGC Technical Committee
  - July: briefing or demo at ESIP meeting, ESRI User Conference
- Technology
  - Open-source software: Geoportal, GeoNetwork, or GI-Cat
  - Protocol(s): CS/W, OpenSearch, Z39.50, OAI-PMH, ??

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Current Status

- Installed Geoportal, GeoNetwork & GI-Cat on local (desktop) sandbox
- Installed Geoportal on NESDIS HQ development server
  - Platform includes Debian Linux, Postgres, Apache, Tomcat
- Plan to install OpenGeo stack (including GeoNetwork) on Federal GeoCloud
- Will do initial testing starting with WAF & CS/W endpoints in Geoportal server matrix
  - Search "geoportal matrix" on NOAA GDocs
  - Ask Matt Austin for access to file if desired

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